Locating Content, Language, and Cognition in a CLIL Art History Biography Activity

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Abstract

This article explains a syllabus that uses the linguistic objectives of a Japanese university language curriculum combined with adapted content objectives from the Australian high school national curriculum for history and media-arts. The content of the syllabus is modern western art history, and the linguistic objectives are adapted from English for Academic Purposes (EAP) reading and writing objectives specified by the university. These objectives are located within a Content and Language and Integrated Learning (CLIL) framework, explaining the justifications for doing so in this context, as well as explaining the syllabus' relation to the hard-soft CLIL dichotomy and other paradigms. The article comments on the role of cognition in these frameworks, and how this has been accounted for in the syllabus. Following this, the article discusses how these theories have influenced the development of an activity, especially in regard to text treatment, and cognitive-linguistic analogues. The activity is a sequenced reading and writing study in the biography genre. The article concludes with comments on plagiarism and COVID 19's effects on the instruction and learning of this activity.

Keywords: CLIL; soft CLIL; modern western art history; cognitive frameworks; genre writing; syllabus design

Introduction

The Global Topics (GT) curriculum is a group of elective syllabi taught at Konan University to 2nd-to-4th year undergraduate students. There are no entry requirements for students to take these courses, other than having completed compulsory preliminary English for Academic Purposes (EAP) courses. The

students are around the B1 level in the CEFR (Council of Europe, 2001), as evidenced by textbooks for that level being prevalent in courses used in similar syllabi in the department, as well as results from standardized testing suggesting as such. In the university curriculum objectives, GT courses' aim to place "emphasis on micro-skills associated with EAP" (Konan, 2020), and in practice recycle and improve these skills. Along with this objective, the courses "examine issues related to globalization from various perspectives while developing cross-cultural awareness" (Konan, 2020), which in practice teachers have taken to mean that courses will have content that covers international themes in a general sense, and allows courses to be located within the 4C's matrix, a dominant CLIL paradigm (Coyle et al., 2010). This affords teachers flexibility in choosing their content, as well as pedagogical approach, with more teachers beginning to apply some form of CLIL practice. In the case of the activity development discussed below, the content (and subject) is modern western art history, and the pedagogy is leaning towards a counterbalanced CLIL approach (Lyster, 2007; Walenta, 2018) with an emphasis on the role of cognition. The activity type is biography writing, modeled on a text about Paul Cézanne.

The Global Topics: Modern Western Art History (GTAH) is a 15-week syllabus is in its 5th iteration, and in the spring semester of 2020 was taught to about 45 students. The course content is the modern era of art, from around 1870 to 1950. The course uses original materials, an unpublished textbook of about 100 pages which I developed using a range of academic and other sources. The course began on the soft CLIL (Kavanagh, 2018; Uemura et al., 2019) side of the spectrum, that is, with more focus on language learning than content learning, but has become harder in each iteration due to this direction resulting in progressively better linguistic attainment. The course can also be identified as "adjunct CLIL", with an explicit focus on using language and content to develop higher order thinking skills, and facilitation for students to use language for specific purposes (Brown, 2015; Coyle et al., 2010).This is also represented in the syllabus through an adapted version of the modern revision of Bloom's taxonomy (Anderson et al., 2001; Bloom, 1956) and this, has been used to inform decisions related to cognitive difficulty at both the unit and activity level. Although the linear, hierarchical nature of cognition expressed in Blooms and other cognitive schema (Early et al., 2005; Slater & Gleason, 2011) has been called into question at times (Dalton-Puffer, 2013) as an organizational tool it has been informative in planning this syllabus: the

weekly schedule has an underpinning cognitive progression from the lowest to highest order descriptors. For more information on how this aspect of the syllabus functions see McNamara, (2016).

Syllabus

As mentioned above, although the university provides some curriculum objectives for the course, teachers are able to autonomously decide upon content scope and sequence, scope of linguistic objectives, and other pedagogical concerns. In this syllabus, the curriculum objectives have been understood to allow a CLIL pedagogical treatment, although this approach, and further, the understanding and application of CLIL, likely differs between teachers working under the GT umbrella.

A CLIL pedagogy was chosen for this particular course for three main reasons.

1. Its relevance to contemporary education in Japan. The Education Ministry (MEXT) suggests that internationalization or globalization of its students has been a priority of its initiatives in the past decade (MEXT, 2020). Additionally, this priority is mimicked by the university in the curriculum objectives of the course. Employing a contemporary, internationally popular pedagogical schema promotes these goals.

2. To better place language in context. As Coyle et al. put it, "to build things with these 'nuts and bolts'"" (Coyle et al., 2010). The "nuts and bolts" being the units and items found in form-based language learning, a pedagogy very visible in other parts of the curriculum, as well as in the broader Japanese L2 tradition. Aside from the constructivist benefits of operationalizing language within a society's context (Mvududu & Thiel-Burgess, 2012; Vygotsky, 1978; Wertsch, 1991),this also could have the effect of making skills learnt in the course be more transferable, as language learning may be seen as less discrete from other disciplines.

3. With the idealistic view that at some future juncture the university can have more integration between its mainstream L1 syllabi and its language programmes. After all, language is central to all learning processes and even just some ability to think in other languages has a positive effect on content learning (Coyle et al., 2010)

CLIL

CLIL pedagogy at its most essential is a two-pronged approach, where a second or

additional language is used for the learning of both content and language. Content and language are not learnt separately, they are interweaved, although the level to which the focus is on either varies by context and often institutional objectives. Language is the vehicle for learning content; and content, enhanced through its contextual operationalisation, is the vehicle for learning language (Coyle et al., 2010). A commonly recognised spectrum, especially pertinent to Japan, is the hard-soft dichotomy, where hard denotes more focus on content, soft more focus on language. In general, European practice operates on the harder edge of the scale, and Japanese is more likely to operate on the soft, although classrooms in Japan apply CLIL in a variety of ways due to the non-institutionalised and emergent nature of local CLIL (Uemura et al., 2019). Of course, there is "content" in all language, even in a shopping list, or more insidiously in a thematic language lesson, but what distinguishes CLIL is the nature of content and language interacting to improve the learning of each. Although it is difficult to precisely locate the syllabus on this scale, the Modern Western Art History Course initially used a soft approach, but in each iteration it has become somewhat harder. This is evidenced by a greater focus on assessment of content, and less on language. Anecdotally, student attainment of both language and content has improved by using this approach, and this has been an impetus in hardening the syllabus.

As GTAH began as a language or soft CLIL course, initially its objectives came from university language curriculum objectives. In general, the course recycles EAP linguistic skills found in previous courses in the university, adding some topic-specific language. For the activity development mentioned below, it recycles skills found in academic writing courses: rhetorical techniques of cause and effect paragraphs; cause and effect language; language of speculation. However, as CLIL pedagogy is an integrated approach, content objectives must also be considered, that is, how students will "do" art history. This idea is what Morton (Llinares, A. & Morton, 2017; Morton, 2020) calls "literacy". In this application of the term, literacy refers to the skills required to operate within a content area. A more specific example: being "literate" in biology would mean, amongst other things, *being able to name* the anatomical features of a plant, as well as *being able to explain* the purpose of say, homeostasis. The idea of "explaining the purpose" in biology is a "literacy" that differs from "explaining the purpose" in a subject such as art history, although the language used to express these ideas may at times overlap. In the case of GTAH, the content objectives have been adapted from the

Australian national high school curricula for History and Media-Arts (ACARA, 2020). Exposition of these objectives can be seen in Figure 1.

Fig 1. *Selected Subject-specific and University Curriculum Objectives*

Subject-specific Content Obj. Descriptor	Curriculum and Syllabus Objectives	Linguistic Representation (adapted and recycled)
"Describe influences from the social, cultural, and historical on art making." (Media-arts)	Examine global cultural issues from various perspectives	Cause and effect language: conditionals; passive sentences
"Speculate on how ideas are represented in what you make and view" (Media-arts)	"Practice the reading skills needed to understand major arguments and supporting details in mainly academic texts"	Hedging language Modals: "might have"
"Process and synthesize information for use of evidence in an argument" (History)	"Practice the writing skills needed for taking notes, citing sources, summarizing, and producing basic academic prose"	Summarisation; paraphrasing; formalities of citation and referencing Note taking
"Use chronological sequencing to demonstrate the relationships between events and developments" (History)	"Develop cross-cultural awareness and basic problem-solving skills"	Chronological sequencers Time prepositions Cause and effect language; cause and effect rhetorical techniques in paragraphs.

Cognition

Morton's reading of literacy implies cognitive function, and this cognition relates to both language and content learning. In the example given above, explaining the purpose of something, as well as requiring that the speaker possess the *cognitive* ability to understand the purpose, they must have the *linguistic* tools to be able to explain it. In this way, cognition has an essential role in CLIL: it is the glue that binds the content and language. Morton and others (Evnitskaya, 2019; Evnitskaya & Dalton-Puffer, 2020; Morton, 2020) also see cognitive functions as often being common across subject disciplines. For example, the cognitive processes one might employ to analyse literature could be similar to how one analyses a painting, and the linguistic analogues of this cognition would also overlap. In this way, GTAH, which combines History and Media-arts cognitive objectives, could be promoting

transferable cognitive and linguistic skills: a further justification for having better integration between language teaching departments and mainstream L1 departments.

Dalton-Puffer (Dalton-Puffer, 2013) attempts to identify cognitive-linguistic commonalities across disciplines through her work developing the Cognitive Discourse Framework (CDF) construct. The CDF construct has its roots in Hallidayan Systemic Functional Linguistics (SFL) and uses theories from speech-act theory to analyse discourse (Dalton-Puffer, 2013; Halliday & Matthiessen, 2004). This discourse analysis allows a researcher to identify the linguistic analogue of a cognitive process- a useful tool for deciding which language to target in a lesson. The empirical support for this construct is ever growing, with studies in central and western Europe generally confirming its validity (Dalton-Puffer et al., 2018). Although this iteration of GTAH has had less dialogic instruction than usual, the heuristic developed for the CDF construct has been helpful for identifying which cognitive functions and linguistic analogues are important to promote for the subject literacy. As mentioned, the GTAH syllabus also uses an adapted Bloom's Taxonomoy of the Cognitive Domain for sequencing and activity design, and this has also informed the development of the content objectives for the syllabus, which can be seen in figure 2.

Activity Development

The above ideas were used when constructing a sequenced activity for this syllabus. After studying a model for its linguistic, cognitive and content-specific genre objectives, students are asked to produce two paragraphs of writing using their own research into an artist from the modern era. The assessment of this task is formative, in later lessons, students will be asked to develop an oral presentation using skills from the steps in this task, as part of a final summative assessment.

Fig 2. Sequence

Step	Step Name	Description
1	Model introduction (Prior homework))	Students asked to read and respond to model biography text. Questions target linguistic and content goals, but these are not made explicit to students.
2	Meta-instruction (Week 2)	The same model text is presented, this time with pertinent linguistic features highlighted and their cognitive analogues explained. These related to overall syllabus objectives; the writing genre.

3	Linguistic activities (Week 2)	Students given tasks (drills; short response questions), related to highlighted language from (2).
4	Content and cognitive activities (Week 2)	Students given tasks (longer response questions), requiring language used in (3), and cognitive processes identified in (2). These tasks require students show understanding of the content.
5	Paraphrasing and Plagiarism (Homework)	A paraphrased version of certain sentences in the text is offered as a model. Students then attempt paraphrasing at lexical and sentential levels using this text and other prompts. Students attempt a short online quiz based on comprehension of the syllabus' and university's plagiarism policy
6	Writing task (Homework)	Students asked to make their own short text in the biography genre. If differentiation is needed, this task can be scaffolded by writing a series of prompts.
7	Assessment	Students are assessed on their use of the language found in (3), the cognition and content in (4), and more generally on their adherence to the genre explained in (2).

In social constructivist thinking, the idea of the "zone of proximal development" (ZPD), requires learners to have experiences which are challenging, but achievable (Vygotsky, 1978). This approach is common in CLIL, with the teacher or syllabus designer being responsible for offering scaffolded cognitive challenges in a student's ZPD (Coyle et al., 2010). In order to better facilitate this, a focus on meta-cognition became necessary in this activity, this is acknowledged in steps 2 and 4 (fig. 2). Further scaffolding can be seen in the sequence loosely following a "test-teach-test" pattern (British Council, 2020).

Model Text

The model text is an adapted version of a Wikipedia entry on the artist Paul Cézanne. Wikipedia, for all its faults as an academic source, is often a "go-to" resource for students. The nature of the biography genre requires small statistical information (such as birthdays), and these are quickly accessed through Wikipedia. Rather than prohibiting use of the site, it seems more pragmatic to acknowledge it by using it as the model, then exemplify how the information from the site can be used by students. This also offers the opportunity for highlighting the ethical considerations of using internet sources, which will be discussed in a later section. Additionally, although biographical data in other areas of the course come from

academic and popular sources (often Taschen series texts), students do not always have ready access to these.

Text Language Treatment

After a cursory look at the text to see if it was likely to generally fit the objectives, the summary section was chosen and cropped from the website.

This text selection was then run through three online tools in order to prepare it at the lexical, sentential and phrasal levels in a similar process explained by Griffiths (Griffith et. al., 2020). Links to these tools are in the appendix of this article.

First, the text selection was entered into LexTutor, a lexical profiler. This profiler allows the user to identify lexical items at their CEFR, General Service List (GSL), and Academic Word List (AWL) levels. Vocabulary items that sat near the B1 CEFR level then remained "as-is" in the model text; items slightly above were collected into a vocabulary list and highlighted in the text (later used to inform activities); items well above the expected student level were either removed, replaced with synonyms, or glossed. This allowed the text to reliably fit within the students expected ZPD.

Second, the text selection was entered into the Multi-Words Unit Profiler. This tool identifies phrasal expressions in a text and grades them on their frequency of occurrence. For the purposes of treating the model text, it allowed me to see which phrases were often occurring, and hence could inform targeting of phrasal-level language activities (step 3 of the fig. 2 sequence). As expected, sequencing and time prepositional phrases were frequent, such as, "during the time", "when he was", "After he went". This suggests that phrasal items such as these are also pertinent to the genre.

Third, the text selection was entered into The English Grammar Project tool. This tool analyses at the sentential level, and identifies communicative intentions of sentences and how these relate to CEFR level "can do" statements. This tool identified similar grammar structures as found in the phrasal-level analyser. However, identifying communicative intentions of sentences has implications for teasing out the analogous cognitive functions.

Text Cognitive Treatment

As the cognitive objectives had been identified in Fig. 1, the next step in the text treatment was to identify their linguistic analogues within the text. This is a somewhat messy stage in the process, as the two cognitive frameworks underpinning the syllabus design (the CDF construct and the version of Bloom's taxonomy) are both admittedly fuzzy. That is, they were not applied as strict rules for how cognition is organized, but as heuristics. This is especially true for the CDF construct, where the readers' understanding of descriptors *should* be contextually variable (Dalton-Puffer, 2013). In addition, I do not want to suggest that there was a neat process of writing objectives top-down: curriculum to syllabus to activities. The text has influenced the syllabus objectives, linguistic choices have influenced cognitive objectives, and so on, the process wasn't linear. However, in order to aid the conceptual organization, and to turn theory into operationalisable activities, language, cognition and objectives were organized in this chart:

Fig 3. Cognitive Linguistic Analogue Planner

Subject Specific Objs.	Bloom's (above) CDF (below)	Ling. Analogue	Text example
Describe influences (social/ cultural/ historical)	Understand: report	Passive voice	His choice of career was eventually **supported by** his father" "A formative influence was **exerted by** Pissarro on Cézanne " ".. this led to.."
	"I tell you details of what can be seen": Describe		
Speculate on ideas	Create: synthesize	Modal "might have"; hedging language	"Cézanne is **said to have**.." "**He might have** become interested.."
	"I tell you something that is potential": Speculate		
Demonstrate relationships b/w events and developments	Analyse: process. Apply: operate.	Sequencers Cause/ effect language	"..it was from her that he got this conception.." "He began⋯" "While also.." "Prior to" "Later in his career"
	"I give you reasons; causes of X"; Explain		

By employing this chart, and also highlighting further cognitive-linguistic analogues in the text, it was more straightforward to plan the content of the activity steps. The adapted text was shared with students in step 2 of the activity sequence to allow for meta cognition.

Notes on COVID 19 and Plagiarism
Delivery

This activity has been attempted in previous iterations of the course, but has been adapted for an online delivery. For some institutional reasons, using video conferencing was limited at certain times in the semester, and this is the reason why the activity planning above does not mention discussion: activity in this iteration was attempted asynchronously. In face-to-face iterations of the course, there is a greater emphasis on dialogic instruction, and hence, oral discourse analysis schema are then useful tools to work with cognition and its linguistic analogues.

Plagiarism

As students are asked to select a text to inform their own biography writing, the prompts and preceding activities must be written in such a way that a simple cut-paste would not fulfil the assessment requirements. This can be seen in the requirements for their assessable biography submission. Students must show cognitive processes through linguistic analogues, for example, explaining the cause and effect of Cézanne's activities in the rain, rather than simply stating the date of when these activities resulted in his death. This requirement, and the level of complexity it implies, means that there is less likelihood that chunks of text can be directly pilfered from a website and surreptitiously deployed.

Showing students how information from websites can be used and acknowledged is another step in promoting academic honesty, however language of attribution and the formalities of citation and referencing are not assessed in this activity. This was a pragmatic decision in order to not confuse the already crowded lesson. However, students are asked to provide a hyperlink to their sources, and three sources are recommended as places to look: the MOMA website, the Tate Gallery website, and Biography.com, these links available in the appendix, the latter being selected due to its popularity amongst students in previous iterations of the course. This control of input, combined with warnings about plagiarism and support for paraphrasing, likely reduces the incidence of direct cut-paste text transfer and

increases the chances for its detection. However, machine translated text seems to becoming more sophisticated and prevalent, and later iterations will react to this contingency.

Appendix
To economise on space, please refer to the following links for appendix content, or contact me through the university channels.

Original text: https://en.wikipedia.org/wiki/Paul_C%C3%A9zanne

Activity (steps 5 and 6) worksheets and prompts: https://1drv.ms/b/s!AtmDNXH WrtV6gz0jzSpmlTRH2Mlf?e=JINGUI

Model text treatment tools
English Grammar Profile Online: https://www.englishprofile.org/english-grammar-profile
LexTutor: https://www.lextutor.ca/vp/comp/
Multi-Word Units Profiler: https://multiwordunitsprofiler.pythonanywhere.com

Websites suggested to students for finding biographical information:
Tate Galleries: https://www.tate.org.uk/art/artists/a-z
Museum of Modern Art (MOMA) https://www.moma.org/artists/
Boography.com: https://www.biography.com/

References

Anderson, L. W., Krathwohl, D. R. D. R., & Bloom, B. S. (2001). *A Taxonomy for learning, teaching, and assessing*. New York, Longman.

Australian Curriculum, Assessment and Reporting Authority (ACARA). The Australian Curriculum. Retrieved September 01, 2020 from: https://www.australiancurriculum.edu.au/

British Council (2020). *Test teach test*. Retrieved October 2020 from https://www.teachingenglish.org.uk/article/test-teach-test

Bloom, B.S. (1956). *Taxonomy of Educational Objectives, Handbook i: the Cognitive Domain*. New York: David McKay Co Inc.

Brown, H. (2015). *Factors influencing the choice of CLIL classes at university in Japan*. ELTWorldOnline.Com, Special Issue on CLIL, 1–22. https://cpb-us-w2.wpmucdn.com/blog.nus.edu.sg/dist/7/112/files/2015/04/Brown_editforpdf-14zs8e6.pdf

Council of Europe. (2001). *Common European framework of reference for languages : learning,*

teaching, assessment. Cambridge, U.K: Press Syndicate of the University of Cambridge.

Coyle, D., Hood, P., & Marsh, D. (2010). *CLIL Content and Language Integrated Learning.* Cambridge University Press.

Dalton-Puffer, C. (2013). A Construct of cognitive discourse functions for conceptualising content-language integration in CLIL and multilingual education. *European Journal of Applied Linguistics, 1* (2).

Dalton-Puffer, C., Bauer-Marschallinger, S., Brückl-Mackey, K., Hofmann, V., Hopf, J., Kröss, L., & Lechner, L. (2018). Cognitive discourse functions in Austrian CLIL lessons: towards an empirical validation of the CDF Construct. *European Journal of Applied Linguistics, 6* (1), 5–29.

Early, M., Potts, D., & Mohan, B. (2005). Teachers' professional knowledge in scaffolding academic literacies for English language learners. *Prospect: An Australian Journal of TESOL, 20* (3), 63–76.

Evnitskaya, N. (2019). Constructing cognitive discourse functions in secondary CLIL classrooms in Spain. In *Content and Language Integrated Learning in Spanish and Japanese Contexts: Policy, Practice and Pedagogy.* https://doi.org/10.1007/978-3-030-27443-6_10

Evnitskaya, N., & Dalton-Puffer, C. (2020). Cognitive discourse functions in CLIL classrooms: eliciting and analysing students' oral categorizations in science and history. *International Journal of Bilingual Education and Bilingualism, 0* (0), 1–20.

Griifths, M., & McNamara, S. (2020) *Tools for adressing linguistic and cognitive aspects of texts in CLIL.* [Conference presentation]. The 3rd J-CLIL Annual Bilingual Conference, Online.

Halliday, M. A. K., & Matthiessen, C. M. I. M. (2004). *Halliday's Introduction to Functional Grammar* (Fourth Edi). Routledge.

Kavanagh, B. (2018). An Introduction to the Theory and Application of CLIL in Japan. *Bulletin of the Institute for Excellence in Higher Education Tohoku University, 4*, 277–283.

Konan University (2020) *Courses.* Retrieved October 2020 from https://www.konan-u.ac.jp/hp/net/courses.html

Llinares, A. & Morton, T. (eds). (2017). *Applied Linguistics Perspectives on CLIL.* John Benjamins, Amsterdam.

Lyster, R. (2007). *Learning and Teaching Languages Through Content : A counterbalanced approach.* John Benjamins, Amsterdam.

MEXT (2020). Support for Internationalization of Universities. Retrieved from https://www.mext.go.jp/en/policy/education/highered/title02/detail02/1373875.htm

McNamara, S. (2016) A CLIL approach to syllabus development utilizing taxonomies from the cognitive domain. Kwansei Gakuin University Journal of Policy studies (52)

Morton, T. (2020). *A Bridge between Content, Literacy and Language for Teaching and Assessment in CLIL. 3*, 7–17.

Mvududu, N. H., & Thiel-Burgess, J. (2012). Constructivism in Practice: The Case for English Language Learners. *International Journal of Education, 4* (3), 108–118. https://doi.org/10.5296/ije.v4i3.2223

Slater, T., & Gleason, J. (2011). Integrating Language and Content: The Knowledge Framework. *The Conference Proceedings of MIDTESOL: Gateway to Global Citizenship*, 6–21.

Uemura, T., Gilmour, G., & Costa, L. fernando. (2019). Testing the Water: Implementing a Soft CLIL Approach for Future Global Engineers at a Japanese University. In *Content and Language Integrated Learning in Spanish and Japanese Contexts, Policy, Practice and Pedagogy* (pp. 175–201).

Vygotsky, L. S. (1978). *Mind in Society* (M. Cole, V. John-Steiner, S. Scribener, & E. Souberman (eds.)). Harvard University Press.

Walenta, M. (2018). Balancing linguistic and extra-linguistic gains in CLIL: a case for content-based structured input. *International Journal of Bilingual Education and Bilingualism, 21* (5), 578–590.

Wertsch, J. V. (1991). A sociocultural approach to socially shared cognition. In *Perspectives on socially shared cognition.* (pp. 85–100). American Psychological Association.